

## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical  
Information Center (STIC) no errors detected.**

Application Serial Number: 10/597,305  
Source: IFW9  
Date Processed by STIC: 08/01/2006

# ***ENTERED***

CRF Errors Edited by the STIC Systems Branch

Serial Number: 10/597,305

CRF Edit Date: 08/01/2005  
Edited by: DA

\_\_\_ Realigned nucleic acid/amino acid numbers/text in cases where the sequence text "wrapped" to the next line

\_\_\_ Corrected the SEQ ID NO. Sequence numbers edited were:

\_\_\_\_\_

\_\_\_ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited:

\_\_\_\_\_

☒ Deleted: \_\_\_ invalid beginning/end-of-file text ; \_\_\_ page numbers

\_\_\_ Inserted mandatory headings/numeric identifiers, specifically:

\_\_\_\_\_

\_\_\_ Moved responses to same line as heading/numeric identifier, specifically:

\_\_\_\_\_

☒ Other: Insert Numeric Identifier C1517

\_\_\_\_\_

\_\_\_\_\_



IFWO

## RAW SEQUENCE LISTING

DATE: 08/01/2006

PATENT APPLICATION: US/10/597,305

TIME: 15:23:16

Input Set : A:\pto.da.txt

Output Set: N:\CRF4\07312006\J597305.raw

```

2 <110> APPLICANT: Korea Research Institute of Bioscience and Biotechnology
3      CHOI, Inpyo
4      KANG, Hyung-Sik
5      YOON, Suk-Ran
6      KIM, Eun-Mi
8 <120> TITLE OF INVENTION: Differentiation regulating agent containing gene which
regulating
9      differentiation from stem cells to natural killer cells as
10     effective ingredient
12 <130> FILE REFERENCE: 58049-00034
14 <140> CURRENT APPLICATION NUMBER: US 10/597,305
15 <141> CURRENT FILING DATE: 2006-07-19
17 <150> PRIOR APPLICATION NUMBER: PCT/KR2005/000188
18 <151> PRIOR FILING DATE: 2005-01-20
20 <150> PRIOR APPLICATION NUMBER: KR 10-2004-0004308
21 <151> PRIOR FILING DATE: 2004-01-20
23 <160> NUMBER OF SEQ ID NOS: 48
25 <170> SOFTWARE: KopatentIn 1.71
27 <210> SEQ ID NO: 1
28 <211> LENGTH: 16
29 <212> TYPE: DNA
30 <213> ORGANISM: Artificial Sequence
32 <220> FEATURE:
33 <223> OTHER INFORMATION: M13 forward primer
36 <400> SEQUENCE: 1
37 gaccggcagc aaaatg                                     16
40 <210> SEQ ID NO: 2
41 <211> LENGTH: 16
42 <212> TYPE: DNA
43 <213> ORGANISM: Artificial Sequence
45 <220> FEATURE:
46 <223> OTHER INFORMATION: M13 reverse primer
49 <400> SEQUENCE: 2
50 caaaagggtc agtgct                                     16
53 <210> SEQ ID NO: 3
54 <211> LENGTH: 20
55 <212> TYPE: DNA
56 <213> ORGANISM: Artificial Sequence
58 <220> FEATURE:
59 <223> OTHER INFORMATION: forward primer for gamma-parvin
62 <400> SEQUENCE: 3
63 ctctgaagga cccagcagtc                                 20
66 <210> SEQ ID NO: 4
67 <211> LENGTH: 20

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```

68 <212> TYPE: DNA
69 <213> ORGANISM: Artificial Sequence
71 <220> FEATURE:
72 <223> OTHER INFORMATION: reverse primer for gamma-parvin
75 <400> SEQUENCE: 4
76 gcagctgtag ggatagcctg 20
79 <210> SEQ ID NO: 5
80 <211> LENGTH: 20
81 <212> TYPE: DNA
82 <213> ORGANISM: Artificial Sequence
84 <220> FEATURE:
85 <223> OTHER INFORMATION: forward primer for Foxplc
88 <400> SEQUENCE: 5
89 cgaatctcca gaaaagcagc 20
92 <210> SEQ ID NO: 6
93 <211> LENGTH: 20
94 <212> TYPE: DNA
95 <213> ORGANISM: Artificial Sequence
97 <220> FEATURE:
98 <223> OTHER INFORMATION: reverse primer for Foxplc
101 <400> SEQUENCE: 6
102 aaatctggac tgtggttggc 20
105 <210> SEQ ID NO: 7
106 <211> LENGTH: 20
107 <212> TYPE: DNA
108 <213> ORGANISM: Artificial Sequence
110 <220> FEATURE:
111 <223> OTHER INFORMATION: forward primer for c-myc
114 <400> SEQUENCE: 7
115 gcccagtgag gatattctgga 20
118 <210> SEQ ID NO: 8
119 <211> LENGTH: 20
120 <212> TYPE: DNA
121 <213> ORGANISM: Artificial Sequence
123 <220> FEATURE:
124 <223> OTHER INFORMATION: reverse primer for c-myc
127 <400> SEQUENCE: 8
128 gaatcggacg aggtacagga 20
131 <210> SEQ ID NO: 9
132 <211> LENGTH: 20
133 <212> TYPE: DNA
134 <213> ORGANISM: Artificial Sequence
136 <220> FEATURE:
137 <223> OTHER INFORMATION: forward primer for KCl
140 <400> SEQUENCE: 9
141 ggcaacgaga agatcaccat 20
144 <210> SEQ ID NO: 10
145 <211> LENGTH: 20
146 <212> TYPE: DNA

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TIME: 15:23:16

Input Set : A:\pto.da.txt

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```

147 <213> ORGANISM: Artificial Sequence
149 <220> FEATURE:
150 <223> OTHER INFORMATION: reverse primer for KC1
153 <400> SEQUENCE: 10
154 ccacattgac ctggcctact 20
157 <210> SEQ ID NO: 11
158 <211> LENGTH: 20
159 <212> TYPE: DNA
160 <213> ORGANISM: Artificial Sequence
162 <220> FEATURE:
163 <223> OTHER INFORMATION: forward primer for PA-PRP
166 <400> SEQUENCE: 11
167 cttattgttg gtgctgccct 20
170 <210> SEQ ID NO: 12
171 <211> LENGTH: 20
172 <212> TYPE: DNA
173 <213> ORGANISM: Artificial Sequence
175 <220> FEATURE:
176 <223> OTHER INFORMATION: reverse primer for PA-PRP
179 <400> SEQUENCE: 12
180 gggttggtcga ggagtgttgt 20
183 <210> SEQ ID NO: 13
184 <211> LENGTH: 20
185 <212> TYPE: DNA
186 <213> ORGANISM: Artificial Sequence
188 <220> FEATURE:
189 <223> OTHER INFORMATION: forward primer for IRAK
192 <400> SEQUENCE: 13
193 gaagccttgc cagatagcag 20
196 <210> SEQ ID NO: 14
197 <211> LENGTH: 20
198 <212> TYPE: DNA
199 <213> ORGANISM: Artificial Sequence
201 <220> FEATURE:
202 <223> OTHER INFORMATION: reverse primer for IRAK
205 <400> SEQUENCE: 14
206 gcaagacaag aaagcaaggg 20
209 <210> SEQ ID NO: 15
210 <211> LENGTH: 20
211 <212> TYPE: DNA
212 <213> ORGANISM: Artificial Sequence
214 <220> FEATURE:
215 <223> OTHER INFORMATION: forward primer for L10A
218 <400> SEQUENCE: 15
219 cacacattgg gcttcacaac 20
222 <210> SEQ ID NO: 16
223 <211> LENGTH: 20
224 <212> TYPE: DNA
225 <213> ORGANISM: Artificial Sequence

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## RAW SEQUENCE LISTING

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PATENT APPLICATION: US/10/597,305

TIME: 15:23:16

Input Set : A:\pto.da.txt

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```

227 <220> FEATURE:
228 <223> OTHER INFORMATION: reverse primer for L10A
231 <400> SEQUENCE: 16
232 tgagttcaca ttccagcagc 20
235 <210> SEQ ID NO: 17
236 <211> LENGTH: 20
237 <212> TYPE: DNA
238 <213> ORGANISM: Artificial Sequence
240 <220> FEATURE:
241 <223> OTHER INFORMATION: forward primer for pre-pro-proteinase 3
244 <400> SEQUENCE: 17
245 acgtgcttct cctccagcta 20
248 <210> SEQ ID NO: 18
249 <211> LENGTH: 20
250 <212> TYPE: DNA
251 <213> ORGANISM: Artificial Sequence
253 <220> FEATURE:
254 <223> OTHER INFORMATION: reverse primer for pre-pro-proteinase 3
257 <400> SEQUENCE: 18
258 agggaacaga gctgactcca 20
261 <210> SEQ ID NO: 19
262 <211> LENGTH: 20
263 <212> TYPE: DNA
264 <213> ORGANISM: Artificial Sequence
266 <220> FEATURE:
267 <223> OTHER INFORMATION: forward primer for myeloblastosis oncogene
270 <400> SEQUENCE: 19
271 gaagaaagtg cctcaccagc 20
274 <210> SEQ ID NO: 20
275 <211> LENGTH: 20
276 <212> TYPE: DNA
277 <213> ORGANISM: Artificial Sequence
279 <220> FEATURE:
280 <223> OTHER INFORMATION: reverse primer for myeloblastosis oncogene
283 <400> SEQUENCE: 20
284 gttcaagaac tgcgaggag 20
287 <210> SEQ ID NO: 21
288 <211> LENGTH: 20
289 <212> TYPE: DNA
290 <213> ORGANISM: Artificial Sequence
292 <220> FEATURE:
293 <223> OTHER INFORMATION: forward primer for CBP35
296 <400> SEQUENCE: 21
297 ctctcctag tgcctacccc 20
300 <210> SEQ ID NO: 22
301 <211> LENGTH: 20
302 <212> TYPE: DNA
303 <213> ORGANISM: Artificial Sequence
305 <220> FEATURE:

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## RAW SEQUENCE LISTING

DATE: 08/01/2006

PATENT APPLICATION: US/10/597,305

TIME: 15:23:16

Input Set : A:\pto.da.txt

Output Set: N:\CRF4\07312006\J597305.raw

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306 <223> OTHER INFORMATION: reverse primer for CBP35
309 <400> SEQUENCE: 22
310 gtcacgactg atccccagtt 20
313 <210> SEQ ID NO: 23
314 <211> LENGTH: 20
315 <212> TYPE: DNA
316 <213> ORGANISM: Artificial Sequence
318 <220> FEATURE:
319 <223> OTHER INFORMATION: forward primer for IL-7 receptor
322 <400> SEQUENCE: 23
323 tgccagattc atgaggtgaa 20
326 <210> SEQ ID NO: 24
327 <211> LENGTH: 20
328 <212> TYPE: DNA
329 <213> ORGANISM: Artificial Sequence
331 <220> FEATURE:
332 <223> OTHER INFORMATION: reverse primer for IL-7 receptor
335 <400> SEQUENCE: 24
336 ggagagcaag cattccagac 20
339 <210> SEQ ID NO: 25
340 <211> LENGTH: 20
341 <212> TYPE: DNA
342 <213> ORGANISM: Artificial Sequence
344 <220> FEATURE:
345 <223> OTHER INFORMATION: forward primer for LPL
348 <400> SEQUENCE: 25
349 cagctgggcc taactttgag 20
352 <210> SEQ ID NO: 26
353 <211> LENGTH: 20
354 <212> TYPE: DNA
355 <213> ORGANISM: Artificial Sequence
357 <220> FEATURE:
358 <223> OTHER INFORMATION: reverse primer for LPL
361 <400> SEQUENCE: 26
362 ccatacctcag tcccagaaaa 20
365 <210> SEQ ID NO: 27
366 <211> LENGTH: 20
367 <212> TYPE: DNA
368 <213> ORGANISM: Artificial Sequence
370 <220> FEATURE:
371 <223> OTHER INFORMATION: forward primer for ferritin H chain
374 <400> SEQUENCE: 27
375 gaccgagatg atgtggctct 20
378 <210> SEQ ID NO: 28
379 <211> LENGTH: 20
380 <212> TYPE: DNA
381 <213> ORGANISM: Artificial Sequence
383 <220> FEATURE:
384 <223> OTHER INFORMATION: reverse primer for ferritin H chain

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**VERIFICATION SUMMARY**

PATENT APPLICATION: US/10/597,305

DATE: 08/01/2006

TIME: 15:23:17

Input Set : A:\pto.da.txt

Output Set: N:\CRF4\07312006\J597305.raw



**Raw Sequence Listing before editing  
(for reference only)**



IFWO

## RAW SEQUENCE LISTING

DATE: 07/26/2006

PATENT APPLICATION: US/10/597,305

TIME: 10:59:00

Input Set : A:\58049-00034.ST25.txt

Output Set: N:\CRF4\07262006\J597305.raw

2 <110> APPLICANT: Korea Research Institute of Bioscience and Biotechnology  
 3 CHOI, Inpyo  
 4 KANG, Hyung-Sik  
 5 YOON, Suk-Ran  
 6 KIM, Eun-Mi  
 8 <120> TITLE OF INVENTION: Differentiation regulating agent containing gene which  
 regulating  
 9 differentiation from stem cells to natural killer cells as  
 10 effective ingredient  
 12 <130> FILE REFERENCE: 58049-00034  
 14 <140> CURRENT APPLICATION NUMBER: US 10/597,305  
 W--> 15 2006-07-19  
 C--> 17 <141> CURRENT FILING DATE: 2006-07-19  
 17 <150> PRIOR APPLICATION NUMBER: PCT/KR2005/000188  
 W--> 18 2005-01-20  
 W--> 20 <150> PRIOR APPLICATION NUMBER: KR 10-2004-0004308  
 W--> 21 2004-01-20  
 23 <160> NUMBER OF SEQ ID NOS: 48  
 25 <170> SOFTWARE: KopatentIn 1.71

Insert  
 C151  
 Does Not Comply  
 Corrected Diskette Needed  
 (pg-1,2)

## ERRORED SEQUENCES

758 <210> SEQ ID NO: 48  
 759 <211> LENGTH: 474  
 760 <212> TYPE: PRT  
 761 <213> ORGANISM: Mus musculus  
 763 <400> SEQUENCE: 48  
 764 Met Glu Ser Lys Ala Leu Leu Leu Val Val Leu Gly Val Trp Leu Gln  
 765 1 5 10 15  
 767 Ser Leu Thr Ala Phe Arg Gly Gly Val Ala Ala Ala Asp Ala Gly Arg  
 768 20 25 30  
 770 Asp Phe Ser Asp Ile Glu Ser Lys Phe Ala Leu Arg Thr Pro Glu Asp  
 771 35 40 45  
 773 Thr Ala Glu Asp Thr Cys His Leu Ile Pro Gly Leu Ala Asp Ser Val  
 774 50 55 60  
 776 Ser Asn Cys His Phe Asn His Ser Ser Lys Thr Phe Val Val Ile His  
 777 65 70 75 80  
 779 Gly Trp Thr Val Thr Gly Met Tyr Glu Ser Trp Val Pro Lys Leu Val  
 780 85 90 95  
 782 Ala Ala Leu Tyr Lys Arg Glu Pro Asp Ser Asn Val Ile Val Val Asp  
 783 100 105 110  
 785 Trp Leu Tyr Arg Ala Gln Gln His Tyr Pro Val Ser Ala Gly Tyr Thr  
 786 115 120 125

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/597,305

DATE: 07/26/2006

TIME: 10:59:00

Input Set : A:\58049-00034.ST25.txt

Output Set: N:\CRF4\07262006\J597305.raw

```

788 Lys Leu Val Gly Asn Asp Val Ala Arg Phe Ile Asn Trp Met Glu Glu
789      130                      135                      140
791 Glu Phe Lys Tyr Pro Leu Asp Asn Val His Leu Leu Gly Tyr Ser Leu
792 145                      150                      155                      160
794 Gly Ala His Ala Ala Gly Val Ala Gly Ser Leu Thr Asn Lys Lys Val
795                      165                      170                      175
797 Asn Arg Ile Thr Gly Leu Asp Pro Ala Gly Pro Asn Phe Glu Tyr Ala
798                      180                      185                      190
800 Glu Ala Pro Ser Arg Leu Ser Pro Asp Asp Ala Asp Phe Val Asp Val
801                      195                      200                      205
803 Leu His Thr Phe Thr Arg Gly Ser Pro Gly Arg Ser Ile Gly Ile Gln
804      210                      215                      220
806 Lys Pro Val Gly His Val Asp Ile Tyr Pro Asn Gly Gly Thr Phe Gln
807 225                      230                      235                      240
809 Pro Gly Cys Asn Ile Gly Glu Ala Ile Arg Val Ile Ala Glu Arg Gly
810                      245                      250                      255
812 Leu Gly Asp Val Asp Gln Leu Val Lys Cys Ser His Glu Arg Ser Ile
813                      260                      265                      270
815 His Leu Phe Ile Asp Ser Leu Leu Asn Glu Glu Asn Pro Ser Lys Ala
816                      275                      280                      285
818 Tyr Arg Cys Asn Ser Lys Glu Ala Phe Glu Lys Gly Leu Cys Leu Ser
819      290                      295                      300
821 Cys Arg Lys Asn Arg Cys Asn Asn Leu Gly Tyr Glu Ile Asn Lys Val
822 305                      310                      315                      320
824 Arg Ala Lys Arg Ser Ser Lys Met Tyr Leu Lys Thr Arg Ser Gln Met
825                      325                      330                      335
827 Pro Tyr Lys Val Phe His Tyr Gln Val Lys Ile His Phe Ser Gly Thr
828                      340                      345                      350
830 Glu Asn Gly Lys Gln His Asn Gln Ala Phe Glu Ile Ser Leu Tyr Gly
831      355                      360                      365
833 Thr Val Ala Glu Ser Glu Asn Ile Pro Phe Thr Leu Pro Glu Val Ser
834      370                      375                      380
836 Thr Asn Lys Thr Tyr Ser Phe Leu Ile Tyr Thr Glu Val Asp Ile Gly
837 385                      390                      395                      400
839 Glu Leu Leu Met Met Lys Leu Lys Trp Met Ser Asp Ser Tyr Phe Ser
840                      405                      410                      415
842 Trp Pro Asp Trp Trp Ser Ser Pro Ser Phe Val Ile Glu Arg Ile Arg
843                      420                      425                      430
845 Val Lys Ala Gly Glu Thr Gln Lys Lys Val Ile Phe Cys Ala Arg Glu
846      435                      440                      445
848 Lys Val Ser His Leu Gln Lys Gly Lys Asp Ser Ala Val Phe Val Lys
849      450                      455                      460
851 Cys His Asp Lys Ser Leu Lys Lys Ser Gly
852 465                      470

```

856 PCT/KR2005/000188

RO/KR 21. 03. 2005

E--> 861 1  
E--> 864 1

*deleted*

**VERIFICATION SUMMARY**

PATENT APPLICATION: US/10/597,305

DATE: 07/26/2006

TIME: 10:59:01

Input Set : A:\58049-00034.ST25.txt

Output Set: N:\CRF4\07262006\J597305.raw

L:15 M:259 W: Allowed number of lines exceeded, <140> CURRENT APPLICATION NUMBER:  
 L:17 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
 L:18 M:259 W: Allowed number of lines exceeded, <150> PRIOR APPLICATION NUMBER:  
 L:20 M:289 W: Identifier Missing or Out-Of-Order, <150> PRIOR APP FILING DATE  
 L:21 M:259 W: Allowed number of lines exceeded, <150> PRIOR APPLICATION NUMBER:  
 L:861 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:48  
 M:332 Repeated in SeqNo=48